

Fusinus dorpeledi, a new species (Gastropoda: Fasciolaridae) from the Red Sea, and range extension for two other species

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ABSTRACT

Fusinus dorpeledi new species from the Red Sea is described. The new species is distinguished by shell characters from the similar Red Sea species *F. leptorhynchus* (Tapparone-Canefri, 1875) and from *F. colus longicauda* (Lamarck, 1801) from southeastern Africa. New range records are provided for *F. bifrons* (Sturany, 1900) and *F. arabicus* (Melvill, 1898).

INTRODUCTION

A new species in the genus *Fusinus* is described from the Red Sea and taxonomic affinities are discussed. Most *Fusinus* are subtidal burrowers, although some species are found in deep water. The discovery and description of this new species is part of a trend in recent years in which a number of new fasciolarids have been named (e.g., Gofas, 2000; Hadorn and Rogers, 2000; Snyder, 2000; Snyder and Snyder, 1999; and others). Specimens of the new species described herein have been collected by fishermen at a depth of 300 m. Additionally, the rediscovery of *Fusinus bifrons* (Sturany, 1900), another Red Sea species, with a range extension to the Indian Ocean, is reported. A probable range extension is also reported for *Fusinus arabicus* (Melvill, 1898). The abbreviation USNM (National Museum of Natural History, Smithsonian Institution, Washington DC), is used here.

SYSTEMATICS

Family Fasciolaridae Gray, 1853
Subfamily Fusinae Wrigley, 1927
Genus *Fusinus* Rafinesque, 1815

Type species: *Fusinus colus* Linnaeus, 1758. Recent, by monotypy.

FIGURE 1

Description: Shell size moderate for genus, length to 100 mm. Siphonal canal long, slightly undulat-

ed, apex subtending an angle of approximately 29°. Sculpture of axial ribs and spiral cords, ribs forming prominent angular knobs on later whorls, with knobs falling approximately at the center of whorl. Body whorl with 11–13 ribs, penultimate and early whorls with 12–14 ribs. Early whorls of paratype (only) lightly sculptured with axial ribs, becoming evanescent. Axial ribs crossed by numerous spiral cords, some brown on later whorls; strong brown cords alternate with weaker uncolored cords on body whorl. Penultimate whorl with 12 strong cords, becoming evanescent toward the suture, and numerous weak, fine, axial lines, visible only under magnification, between axial ribs. Aperture typically ovate and elongate; parietal shield shiny, waxy white, extending onto siphonal canal. Spiral cords beneath shield raised to form lirate sculpture. Canal long, thin, somewhat sinuous. Operculum claw-like, light brown. Protoconch, periostracum, and radula unknown.

Type material: Holotype USNM 903651, length 107 mm, width 24.4 mm, spire height 40 mm, live-collected. Paratype, Peled Collection (damaged), length 72.8 mm, width 22.8 mm, spire and siphonal canal broken, dead-collected, from type locality.

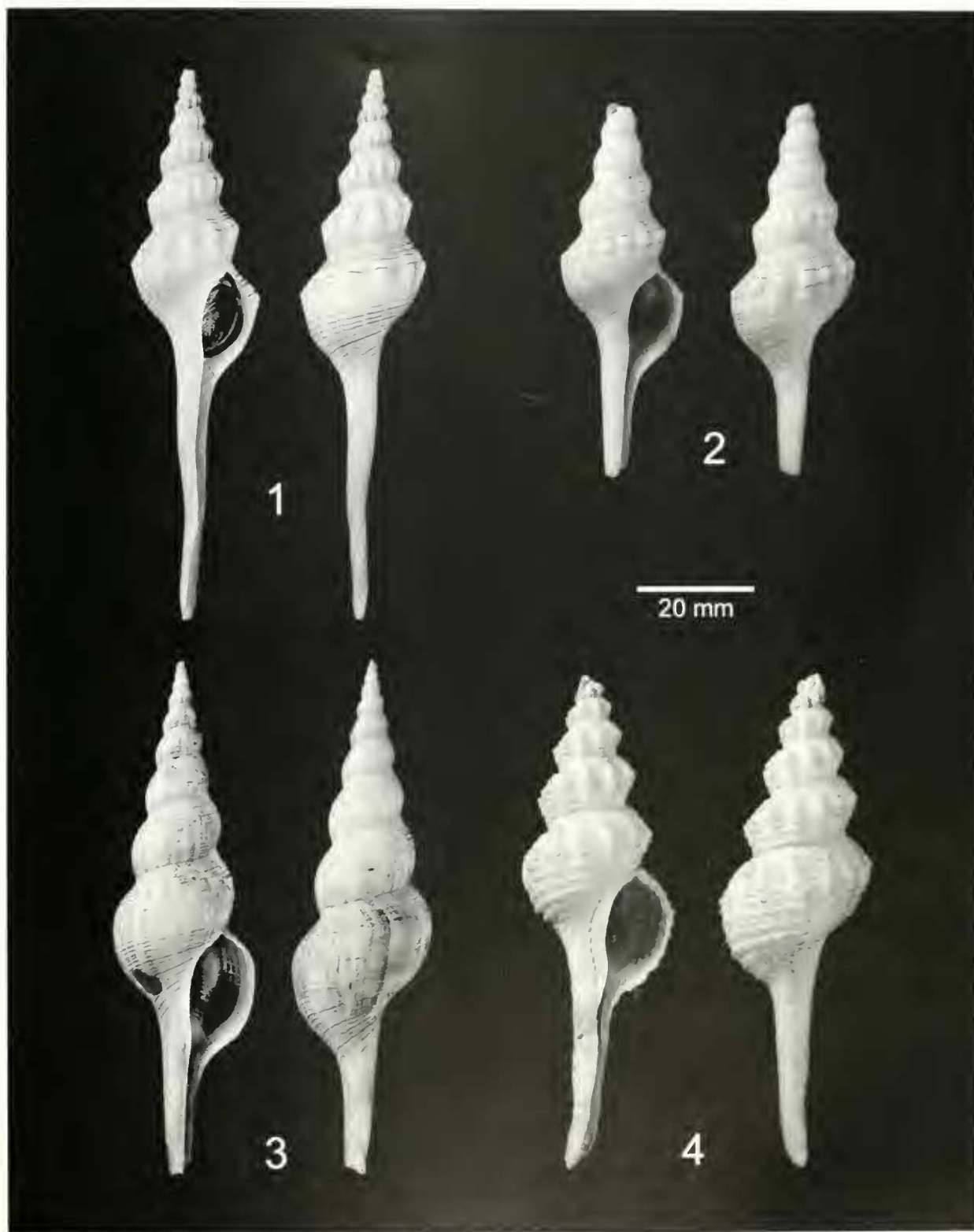
Type locality: Red Sea off Nexiot (Egypt), 75 km south of Elat (Israel), 300 m depth on sandy bottom.

Etymology: The species is named after Dov Peled (Tivon, Israel), a student, collector and dealer in the shells of the Red Sea area.

Distribution and habitat: Known only from type locality.

Discussion: *Fusinus dorpeledi* is most closely related to *F. leptorhynchus* (Tapparone-Canefri, 1875), which is well illustrated in Sharibati (1984: pl. 23, fig. 7). The knobs on *F. leptorhynchus*, formed by the axial ribs, are fewer, numbering just 9, and are more square than those on *F. dorpeledi*. The operculum of *F. leptorhynchus* is distinctively reddish brown, and the shell is smaller, typically ranging between 75 and 80 mm, with a proportionately shorter siphonal canal. These differences are sufficient to rule out *F. dorpeledi* being a deeper-water

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Figures 1–4. Species of *Fusinus*. 1, 2. *Fusinus doupeledi* new species. 1. Holotype, USNM 903651, 107 mm length, from sandy bottom off Neviot (Egypt), 75 km south of Elat (Israel), Red Sea, depth 300 m. 2. Paratype, Peled Collection, 72.5 mm length, from type locality. 3. *Fusinus bifrons* (Sturany, 1900), Peled Collection, 99.9 mm length, from Elat, Red Sea, Israel, depth 350–400 m. 4. *Fusinus arabicus* (Melvill, 1898), Snyder Collection, 96.6 mm length, trawled by fishermen off El Tur, Gulf of Suez (Egypt), depth 32–40 m.

form of *F. leptorhynchus*. Comparison can also be made with *F. colus longicauda* (Lamarck, 1801) from the east coast of southern Africa (Cernohorsky, 1972: pl. 48, fig. 1a); that species has 10 axial ribs on the penultimate whorl. However, whereas the number of axial ribs increases toward the posterior end of the spire of *F. dorpeledi*, the opposite is true in *F. colus longicauda*. The axial ribs are not nearly so pronounced on the body whorl in *F. colus longicauda* as in *F. dorpeledi*; the former grows to approximately 200 mm.

Fusinus bifrons (Sturany, 1900)
(Figure 3)

Sturany (1900:197) introduced a deep-water species, *Fusinus bifrons*, dredged in depths of 490–900 m in the Red Sea. He compared this axially ribbed species to *F. forccps* (Perry, 1811), *F. multicastratus* (Lamarck, 1822), *F. toreuma* (Deshayes, 1843) (a synonym of *F. colus* (Linnaeus, 1758)), and *F. leptorhynchus* (Tapparone-Canevari, 1875), and he named a smooth variety of his new species “form *paucicostata*.” Later, Sturany (1903: pl. 1) illustrated *F. bifrons* and erroneously referred to the taxon *paucicostata* at specific rank. According to R. Janssen of the Senckenberg Museum, Frankfurt (reported privately by R. Hadorn), the type material of this “form” differs from that of the nominate species only in sculpture and this “form” should be considered a synonym of *F. bifrons*.

Two freshly-collected specimens of the smooth form of *F. bifrons* were examined, one 99.9 mm long, 26.6 mm width, with broken siphonal canal (Peled Collection, from the Red Sea), the other 106.5 mm long, 26.9 mm width (Snyder Collection, from the Indian Ocean). The smaller specimen was dredged on a sandy bottom at 350–400 m off Neviot (Egypt), 75 km south of Elat (Israel), Red Sea. The larger specimen was collected by Russian research expeditions to the Saya de Malha Bank in the Indian Ocean (Bondarev and Roeckel, 1992; Sirenko, 1995). The larger specimen was illustrated by Sirenko (1995: fig. 7). This represents a significant range extension for this species from the Red Sea to the Indian Ocean.

Fusinus arabicus (Melvill, 1898)
(Figure 4)

This species, previously reported, represents a range extension of *Fusinus arabicus* (Mel-

known from the Gulf of Arabia, is figured in Bosch et al. (1995: 136, species 578). Two specimens were trawled by fishermen in the 1980s off El Tur, Gulf of Suez (Egypt), in depths of 32–40 m. Both specimens were trawled as dead shells and hence this range extension is stated without absolute certainty. Even though taken by commercial trawlers, with notoriously vague collecting data, it is virtually certain that the specimens were collected in the Red Sea rather than the Arabian Sea. These two dead-collected specimens are identical in almost all respects to Arabian Sea specimens of *F. arabicus* (Melvill, 1898).

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